

Amendment under 37 C.F.R. §1.111  
Teiji KOHARA et al.

U.S. Patent Application Serial No. 09/622,694  
Attorney Docket No. 001046

### **REMARKS**

Claims 1-22 are pending in the application. Claims 1-5, 7, 8, 10-13 and 19-22 are rejected over newly cited art. Claims 6 and 9 are allowed. Claims 14-18 are objected to. Claims 7 and 8 are herein canceled without prejudice or disclaimer. Claims 1 and 19-22 are herein amended. New claims 23-32 are herein added. Attached is a marked-up version of the changes by the current amendment, captioned "Version with Markings to Show Changes Made." Applicants submit that no new matter is added.

### **Claim Rejections under 35 U.S.C. §103**

Claims 1-5, 7, 8, 10-13 and 19-22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Natori et al. (5,883,192).

The Examiner concludes that the basic patentably distinct limitations are present in Natori et al., and that it would have been obvious to make the changes as disclosed in the cited dependent claims.

Applicants respectfully traverse the rejection. Applicants note that Natori et al. discloses a reflector comprising a substrate comprised of thermoplastic resin containing an alicyclic structure. However, the reference does not disclose a reflector comprising a substrate comprised of thermoplastic resin containing an alicyclic structure "on which is formed a reflecting layer". Further, the reference does not disclose that a reflecting layer is comprised of a metal.

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The reference discloses a thermoplastic resin containing an alicyclic structure. However, the reference does not disclose a thermoplastic resin containing an alicyclic structure "selected from the group consisting of a ring-opening polymer of a norbornene-based monomer, a ring-opening polymer hydrogenate of a norbornene-based monomer, an addition polymer of a norbornene-based monomer, an addition polymer of a norbornene-based monomer and vinyl compound, and a vinyl alicyclic hydrocarbon polymer".

Therefore, Applicants submit that independent claims 1, 19, 20, 21, and 22 should be allowed. Further, because claims dependent therefrom are at least as narrow as the independent claims, Applicants submit that the claimed invention, as herein amended, is patentable over the cited references. Withdrawal of the rejections and passage of the claims to issue is earnestly requested.

If the Examiner believes that this application is not new in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

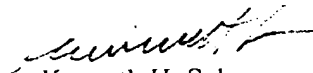
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In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, WESTERMAN & HATTORI, LLP

  
Kenneth H. Salen  
Attorney for Applicants  
Reg. No. 43,077

KHS/plb  
Atty. Docket No. 001046  
Suite 1000, 1725 K Street, N.W.  
Washington, D.C. 20006  
(202) 659-2930



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Enclosures: Version with Markings to Show Changes Made

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

Please amend claims 1 and 10-22 as follows:

1. (Amended) A lighting equipment having a reflector comprising a substrate comprised of a thermoplastic resin containing an alicyclic structure on which is ~~formed a reflecting layer with a reflectance of at least 70%~~ provided a metal film.

10. (Amended) The reflector for a lighting equipment as set forth in claim 7 32, wherein said reflecting layer has a thickness of 5 to 10,000 nm.

11. (Amended) The reflector for a lighting equipment as set forth in claim 7 32, characterized in that said reflecting layer is provided by vapor deposition.

12. (Amended) The reflector for a lighting equipment as set forth in claim 7 9, characterized in that said substrate is comprised of a resin composition containing a thermoplastic resin containing an alicyclic structure and at least one compounding agent selected from the group ~~comprising~~ consisting of a partial ether compound of a polyhydric alcohol, a soft polymer, a filler, and a compound incompatible with the thermoplastic resin having an alicyclic structure.

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13. (Amended) The reflector for a lighting equipment as set forth in claim 7 2, characterized in that said substrate is comprised of a resin composition comprised of a thermoplastic resin containing an alicyclic structure to which is blended a soft polymer having a glass transition temperature of not more than 30°C.

14. (Amended) The reflector for a lighting equipment as set forth in claim 7 2, characterized in that the substrate is comprised of a resin composition comprised of a thermoplastic resin containing an alicyclic structure to which is blended a crystalline polymer, 2

15. (Amended) The reflector for a lighting equipment as set forth in claim 7 2, characterized in that the substrate is comprised of at least one type of thermoplastic resin containing an alicyclic structure selected from the group comprising consisting of a ring-opening polymer of a norbornene-based monomer, a hydrogenate of a ring-opening polymer of a norbornene-based monomer, and an addition polymer including addition type repeating units of an at least three-ring norbornene-based monomer.

16. (Amended) The reflector for a lighting equipment as set forth in any of claims 7 2 to 15, characterized in that the amount of repeating units containing polar groups in the thermoplastic resin containing an alicyclic structure is not more than 50 wt %.

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17. (Amended) The reflector for a lighting equipment as set forth in any of claims 7 to 15, characterized in that the thermoplastic resin containing an alicyclic structure has a melt flow rate, measured by JIS-K6719 at a temperature of 280°C and a load of 2.16 kgf, of 4 to 100 g/10min.

18. (Amended) The reflector for a lighting equipment as set forth in any of claims 7 to 14, characterized in that the thermoplastic resin containing an alicyclic structure has repeating units comprised of ring structures other than norbornene rings.

19. (Amended) A lens for a lighting equipment comprised of a resin composition comprising:

a thermoplastic resin containing an alicyclic structure selected from the group consisting of a ring-opening polymer of a norbornene-based monomer, a ring-opening polymer hydrogenate of a norbornene-based monomer, an addition polymer of a norbornene-based monomer, an addition polymer of a norbornene-based monomer and vinyl alicyclic hydrocarbon polymer, and

at least one compounding agent selected from the group comprising consisting of a partial ether compound of a polyhydric alcohol, ~~and/or~~ a partial ester compound of a polyhydric alcohol, a soft polymer, a filler, and a compound incompatible with the thermoplastic resin having an alicyclic structure.

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20. (Amended) A lamp cover for a lighting equipment provided in front of a light source and allowing passage of light of the light source, said lamp cover for a lighting equipment comprised of a thermoplastic resin containing an alicyclic structure selected from the group consisting of a ring-opening polymer of a norbornene-based monomer, a ring-opening polymer hydrogenate of a norbornene-based, an addition polymer of a norbornene-based monomer, an addition polymer of a norbornene-based monomer and vinyl compound, and a vinyl alicyclic hydrocarbon polymer.

21. (Amended) A lamp cap for a lighting equipment covering part of all of the light source, said lamp cap comprised of a thermoplastic resin containing an alicyclic structure selected from the group consisting of a ring-opening polymer of a norbornene-based monomer, a ring-opening polymer hydrogenate of a norbornene-based monomer, an addition polymer of a norbornene-based monomer, an addition polymer of a norbornene-based monomer and vinyl compound, and a vinyl alicyclic hydrocarbon polymer.

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22. (Amended) A light guide for a lighting equipment provided in a light chamber of the lighting equipment and having a light incident face to which is introduced at least one type of light selected from the group of light from a light source and light from a light source reflected by a reflector and an emission face emitting the incident light introduced from the incident surface to the outside, said light guide for resin containing an alicyclic structure having a glass resin containing an alicyclic structure having a glass transition temperature of at least 90°C selected from the group consisting of a ring-opening polymer of a norbornene-based monomer, a ring-opening polymer hydrogenate of a norbornene-based monomer, an addition polymer of a norbornene-based monomer, an addition polymer of a norbornene-based monomer and vinyl compound, and a vinyl alicyclic hydrocarbon polymer.